

REMARKS

The foregoing amendment amends the claims and the drawings to address the objections of the Examiner. Pending in the application are Claims 1-51, of which Claims 1, 10, 15, 22, 30, 39, and 45 are independent. The following comments address all stated grounds for rejection and Applicants submit that the presently pending claims, as identified above, are in condition for allowance.

Amendment and/or cancellation of the claims is not to be construed as an acquiescence to any of the objections/rejections set forth in the instant Office Action, and was done solely to expedite prosecution of the application. Applicants reserve the right to pursue the claims as originally filed, or similar claims, in this or one or more subsequent patent applications.

Objections to the Drawings

Regarding the objection to Figures, Applicants have amended Figure 1, Figure 5A and Figure 5B to include larger numbers and letters, as requested by the Examiner, and request that the objection to the drawings be reconsidered and withdrawn.

35 USC §112 Rejections

In the pending office action, the Examiner has rejected Claims 10-14 for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention. In light of said rejection, Applicants have submitted amended Claim 10 which clarifies the optical filter element referred to in Claim 10. In light of this amendment, Applicants respectfully submit that Claims 10-14 are in condition for allowance as drafted.

35 U.S.C. §102 Rejections

Claims 1-3, 22-24, 30-32, 39, and 45 have been rejected under 35 USC §102 (e) as being anticipated by Milton, et al. The Examiner further rejects Claims 1-4, 22-25, 30-33, 39, and 45 as being anticipated by Hutchinson, et al. Applicants respectfully traverse these objections and submit that the pending claims distinguish patentable over the cited art.

Addressing the Examiner's rejection to Claims 1-3, 22-24, 30-32, 39, and 45, of which Claims 1, 22, 30, 39, and 45 are independent, Applicant submits that the Milton art fails to disclose each element of the pending claims. As recited in the Examiner's rejections under 35

USC 103 of the pending office Action, "The difference between Milton and the claimed invention is that Milton suggests dropping a whole band of channels." In contrast, as set forth in pending independent Claims 1, 22, 30 39, and 45, the present invention allows for the dropping a select portion of wavelengths from the entire set of wavelengths passing through the node. Applicants therefore submit that Milton fails to disclose each element of the pending independent claims. Applicants further submit that dependent Claims 2-3, 23-24, 31-32 are further in condition for allowance by their very nature as dependent claims. In light of this, Applicants respectfully request the Examiner withdraw those rejections under 35 USC 103 directed toward Claims 1-3, 22-24, 30-32, 39, and 45 and pass said claims to allowance.

The Examiner has further rejected Claims 1-4, 22-25, 30-33, 39, and 45, of which Claims 1, 22, 30, 39, and 45 are independent, in view of Hutchinson. Hutchinson recites a communication system including a plurality of nodes interconnected by optical fibers. As set forth in Claim 1 of Hutchinson,

"a device at each alternate node coupled to the optical transmission medium *for dropping a first band* that connects each of the plural nodes, a second band that connects each of the alternate plural nodes and passively transmitting a third band that connects nodes intermediate to the alternate plural nodes"

Using such an arrangement, wherein an entire band is dropped, a high level of wavelength termination diversity can be had.

The present invention, in comparison, teaches an optical node in an optical communication network that allows for the adding and dropping of wavelengths using a filter. The optical signal in the present invention has a plurality of wavelengths divided into discrete bands associated with the signal. Each band, in turn, constitutes a group of contiguous wavelengths. The filter is used to *drop the predetermined wavelengths from a plurality of bands* in the multi-wavelength optical signal, while the remained of wavelengths that are not within the fixed set of wavelengths to be dropped are forwarded. Applicant respectfully submits that the cited art fails to disclose the adding and dropping of *a wavelength* in accordance with the present invention, but rather provides a means by an entire band is dropped, thereby allowing a high level of wavelength termination diversity. In light of this, Applicants respectfully submit that independent Claims 1, 22, 30, 39, and 45 are in condition for allowance as drafted. Applicant further submits that those rejected dependent claims which rely on the aforementioned

independent claims for support are further in condition for allowance by their very nature as independent claims. In light of this, Applicants respectfully ask that the Examiner pass Claims 1-4, 22-25, 30-33, 39, and 45 to allowance.

35 U.S.C. §103 Rejections

In the Office Action, the Examiner rejects Claims 6-10 and 12-21 under 35 U.S.C. 103(a) as being unpatentable over Milton in view of Farries (U.S. Patent No. 6,201,907B1). Applicants submit that, as noted by the Examiner in the present Office Action, the Milton art fails to teach or suggest the dropping of individual wavelengths within the band of channels present on an optical signal. The art to Farries recites a multi channel multiplexer/ demultiplexer using at least one multi-port optical circulator and a plurality of Bragg optical fiber gratings. The use of the Bragg grating in Farries proves beneficial as accurate and efficient channel separation can be had with little signal loss. As set forth in column 2, lines 31-37,

“ In a preferred embodiment the present invention provides an optical drop circuit for dropping a channel *n comprising a band of wavelengths of light* centered about a wavelength λ from a signal including channel *n* and a plurality of other channels comprising bands of different wavelengths of light...”

As indicated in the cited language, Farries only discloses the dropping of *an entire band of wavelengths from the optical signal*. As set forth in Claims 6-10 and 12-21, and the independent claims on which they rely, the present invention provides for the dropping of an individual wavelength from a band of wavelengths, and the subsequent passage of the remaining wavelengths. Applicant submits that there is no suggestion within Farries to drop only a portion of a band of wavelengths.

Applicants further submit that the cited art fails to teach or suggest an optical drop unit using a fixed drop filter that is capable of accessing wavelengths from *different bands*, as set forth in independent Claims 1 and 10, on which Claims 6-10 and 12-21. As set forth prior, the Farries art solely serves to suggest the dropping of a single band, as opposed to the accessing of wavelengths from different bands. In light of this, Applicants respectfully request that the Examiner pass Claims 6-10 and 12-21 to allowance.

Furthermore, Applicants respectfully submit that there is no motivation by one skilled in the art to modify Milton to include the subject matter of Farries as Milton concerns passive

pass-through of an optical signal in an optical network, while Farries discloses the dropping of a band of wavelengths in an optical signal such that a group delay is provided for the dropped band of wavelengths. Applicants further submit that even if combined, the Milton and Farries references fail to teach or suggest each element of the pending application. The references also lack motivation for combining the teachings of Milton with those of Farries to reach a determining that it would be obvious to drop a fixed set of wavelengths from different bands, while simultaneously forwarding wavelengths that do not comprise the fixed set of wavelengths, as recited in independent Claims 1, 10, on which Claims 6-9 and 12-21 depend.

Applicants submit that to determine if a *prima facie* case of obviousness exists, it is necessary to first determine whether the prior art teachings are sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification. The prior art must provide contain the motivation to make a change to its own teachings to arrive at the invention under rejection. In light of this, it is not sufficient that the prior *could be* so modified; instead the prior art must teach or suggest that the prior art *should be* so modified.

Applicants submit that the Milton reference specifically teaches the dropping of bands of wavelengths, and additionally prominently teaches away from the dropping individual discrete wavelengths at column 2, lines 43-47, which read,

“ The use of *bands* as distinct from discrete wavelengths allows the filter specifications to be relaxed in the area of sideband roll off slope since there are cascade filters involved at each node.”

In light of this, Applicants submit that the Examiner’s combination of references to reject the claims is improper.

Applicants further submit that, as set forth by U.S. Law, even if a combination of the references teaches every element of the claimed invention, without a motivation to combine, a rejection based on a *prima facie* case of obvious is improper. In the present case, as set forth above, the Examiner has not provided an objective reason to combine the teachings of the references to support the statement that it would have been obvious by one skilled in the art to combine the Milton and Farries references. Applicants submit that the pending rejection to Claims 1-51 constitutes nothing more than a picking and choosing of the various elements of the claims from a number of references based, not on motivation from the references themselves, but

rather based on the teachings of the application. Thus, the instant rejection constitutes an impermissible hindsight reconstruction of the invention.

In the alternative, Applicants submit that the pending claims are patentable over the references as the cited references fail to teach or suggest the dropping of a fixed set of wavelengths from different bands, while simultaneously passing those wavelengths that are not within the fixed set to be dropped.

Claim 11 was further rejected under 35 USC 103(a) as being unpatentable over Milton, and Farries and further in view of Scobey et al (U.S. Patent No. 6,389,188 B1) and Canoglu et al. (U.S. Patent No. 6,407,838 B1). Applicants respectfully traverse this rejection and submit that the cited Milton and Farries references fails to render Claim 10, on which Claim 11 depends, obvious, as Milton and Farries fails to teach or suggest the dropping of a pre-selected wavelength from an optical signal in accordance with the present invention. Additionally, Applicants submit that the cited Scobey art discloses an optical router and switch, which discloses at column 3, lines 38-44,

“A related objective is to provide an optical device that is capable of routing one or more *selected channels* in a given incoming wavelength multiplexed optical signal, while at the same time permitting the *non-selected channels* to pass without significant attenuation, signal loss, polarization mode dispersion, ripple, or bandwidth narrowing.”

As set forth prior, the present invention, teaches the dropping of a predetermined *wavelength* as opposed to the broad channel, which contains a plurality of wavelength, as disclosed by Scooby. Additionally, in regards to the Canoglu reference, Applicants submit that Canoglu fails to teach or suggest the dropping of a *fixed* set of wavelengths from different bands, as recited in independent Claim 10, but rather *teaches away* from dropping a *fixed* set of wavelengths from different bands, as Canoglu specifically requires that the node be capable of changing the set of wavelengths that are added and/or dropped at the node. In view of this, Applicants submit that the cited combination of references fails to render the present Claim 11 obvious.

Claims 4 and 5 are additionally rejected as being obvious in view of Milton, Farries, and Scobey and further in view of Hutchinson. Applicants respectfully traverse this rejection and submit that the cited Milton, Farries and Scobey references fail to teach or suggest the dropping

of a particular wavelength from a bundle of wavelengths as set forth in independent Claim 1, on which Claims 4 and 5 rely. The Hutchinson art additionally fails to teach or suggest this element. In light of this, as well as those arguments set forth prior, Applicants respectfully requests the passage of Claims 4-5 to allowance.

Claims 6-10,12-21, 26-32, 35-38, 40-44, and 46-51 are further rejected as being obvious in light of Milton in view of Nielsen (U.S. Patent No. 6,559,988B1) Applicants traverse, and respectfully submit that the addition of the Nielsen reference fails to render the aforementioned claims obvious. Nielsen, like Milton, discloses the dropping of optical channels, wherein these channels may be operating at different data rates. Column 2, lines 8-12, which read in part,

“Flexibility s increased and cost is reduced in an optical wavelength add/drop multiplexer *configured to add or drop two or more WDM channels* that may each be operating at one of either a first data rate or a second data rate.”

In view of such language, Applicants respectfully submit that the present combination of references fails to teach or suggest each element of independent Claims 1, 10, 15, 30, 39, and 45, on which Claims 6-9, 12-14, 16-21, 26-29, 31-32, 35-38, 40-44, and 46-51 rely on for support. In view of this, Applicants respectfully request that the Examiner pass Claims 6-10,12-21, 26-32, 35-38, 40-44, and 46-51 to allowance as drafted

CONCLUSION

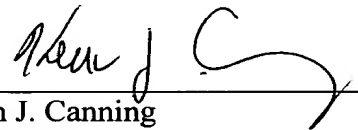
In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. SYCS-008, from which the undersigned is authorized to draw.

If there are any remaining issues, we invite a call to the Applicants' representative at the telephone number listed below.

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Respectfully submitted,

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